

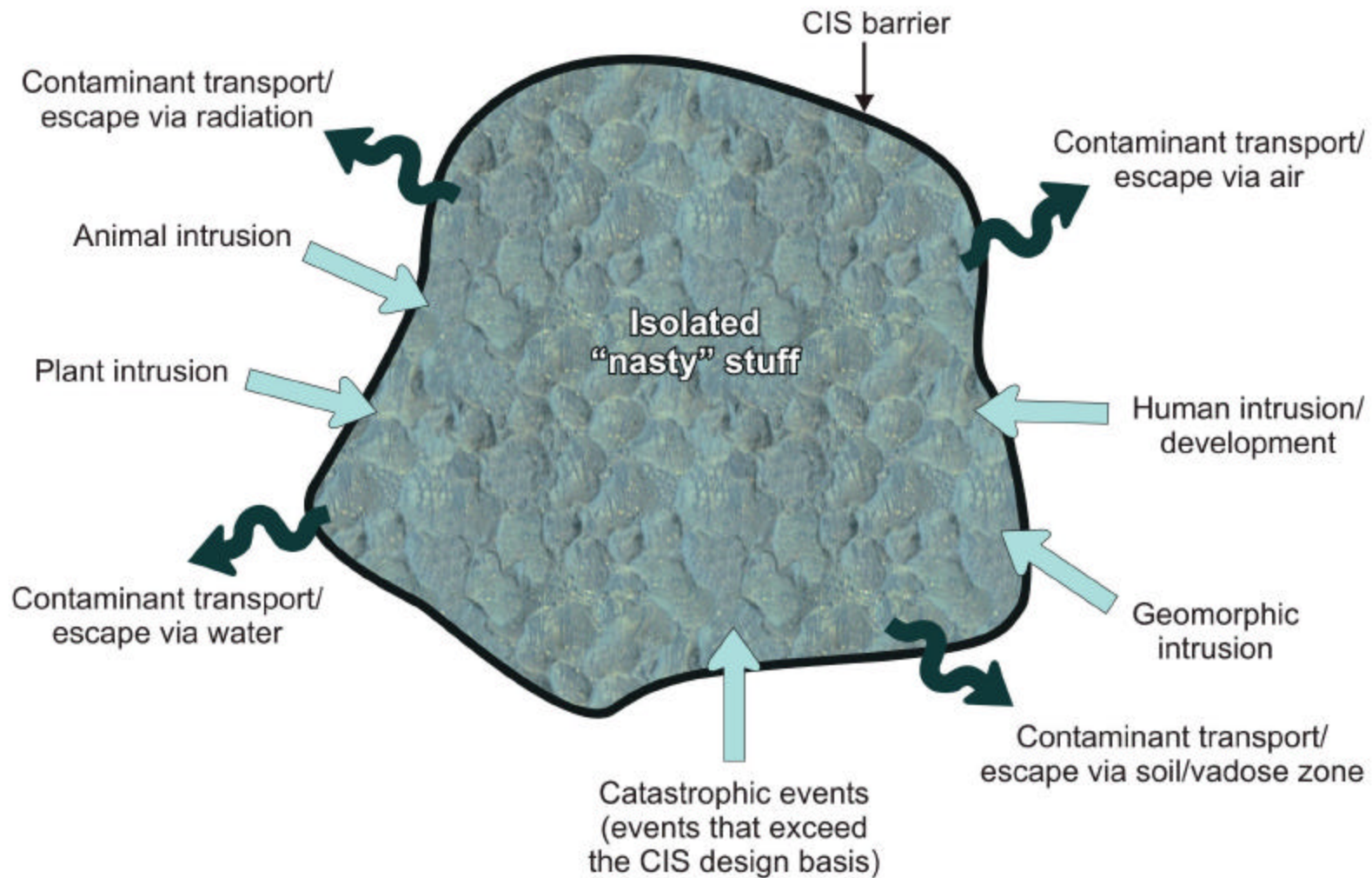
# Isn't My Site Different?

**Mark Plessinger**  
**MACTEC Environmental Restoration Services**  
**Grand Junction, Colorado**  
**(970) 248-6571**  
**[mplessinger@gjo.doe.gov](mailto:mplessinger@gjo.doe.gov)**



**GJO**  
Grand Junction Office

# Generic Contaminant Isolation System (CIS)



# Purpose of CIS

- ◆ Prevent escape of contaminants
- ◆ Prevent intrusion by external events



# Elements of CIS

- ◆ **Natural setting**
  - Geology
  - Hydrology
  - Topography
- ◆ **Institutional setting**
  - Engineered barriers
    - ◆ Structural
    - ◆ Hydraulic
    - ◆ Passive
  - Institutional controls



# Avenues of Contaminant Escape From CIS

- ◆ Contaminant transport by water
- ◆ Contaminant migration through vadose zone
- ◆ Contaminant transport through air
- ◆ Radiation



# Spectrum of Potential External Impacts

- ◆ Human activity
- ◆ Animal activity
- ◆ Plant encroachment
- ◆ Erosion
- ◆ Catastrophic events



# Spectrum of Potential CIS Performance Monitoring

- ◆ Air monitoring
- ◆ Groundwater monitoring
- ◆ Surface water monitoring
- ◆ Soil monitoring
- ◆ Radiation monitoring



# Conclusions Common to All CISs

- ◆ Limited number of contaminant escape pathways
- ◆ Limited number of intrusive pathways
- ◆ Site-specific differences dictate relative emphasis on monitoring of pathways

